

In the Claims:

1-25. (Canceled).

26. (New) A method of improving the visual perception ability of a person with respect to a particular eye condition of at least one eye, comprising:

in at least one evaluation session of an evaluation phase, displaying to the person a plurality of images selected to test the visual perception ability of the person with respect to at least one visual defect, and to elicit responses from the person indicative of the level of the person's visual perception ability with respect to said at least one visual defect;

utilizing said responses to select another plurality of images designed to treat the person with respect to a detected visual defect and thereby to improve the visual perception ability of the person with respect to the detected visual defect;

and in a treatment phase, applying to said at least one eye of the person, training glasses with reduced refraction for the respective eye; and

displaying to the person said another plurality of images in at least one treatment session until the visual perception ability of the person has been improved with respect to said detected visual defect.

27. (New) The method according to Claim 26, wherein said treatment phase includes a plurality of treatment sessions in each of which are displayed to the person a plurality of images designed to elicit responses to be used for selecting the plurality of images in a subsequent treatment session such as to progressively improve the visual perception ability of the person with respect to the detected visual defect; and

wherein, after each treatment session, the refraction of the training glasses is increased, decreased, or remains the same for the next treatment session as determined in order to progressively improve the visual perception ability of the person with respect to the detected visual defect.

28. (New) The method according to Claim 27, wherein each of said treatment sessions includes a plurality of visual perception tasks in each of which there is displayed to the person at least one image including stimuli designed to elicit a response useful for selecting at least one other image to be displayed in the subsequent visual perception task of the respective treatment session such as to progressively improve the visual perception ability of the person with respect to the detected defect; and

wherein, after at least one treatment session, the refraction of the training glasses is increased or decreased for the next treatment session as determined in order to progressively improve the visual perception ability of the person with respect to the detected visual defect.

29. (New) The method according to Claim 28, wherein said visual perception tasks in at least some of said sessions in the treatment phase include spatial frequency changes in which the spatial frequency of the stimuli is changed; wherein the spatial frequency is changed starting with lower spatial frequencies and progressively moving to higher spatial frequencies; and

wherein after at least one treatment session, the refraction of the training glasses is increased or decreased for the next treatment session as determined in order to progressively improve the visual perception ability of the person with respect to the detected visual defect.

30. (New) The method according to Claim 28, wherein the eye condition includes astigmatism characterized by a distortion area in an astigmatic zone; and wherein, in at least some of said treatment sessions in the treatment phase, the orientation of the stimuli are changed by progressing towards the distortion area in the astigmatic zone.

31. (New) The method according to Claim 28, wherein said treatment phase includes a sufficient number of treatment sessions to improve the person's contrast sensitivity function by the person achieving a desired range of contrast levels representing a desired contrast funnel.

32. (New) The method according to Claim 31, wherein after at least one treatment session, the refraction of the training glasses is increased, decreased, or remains the same for the next treatment session as determined in order to achieve the desired range of contrast levels representing a desired contrast funnel to progressively improve the visual perception ability of the person with respect to the detected visual defect.

33. (New) The method according to Claim 27, wherein said evaluation phase includes a plurality of evaluation sessions in each of which at least one plurality of images are displayed to the person to elicit responses, the responses of each evaluation session being utilized to select the plurality of images to be displayed in the next evaluation session; and

wherein each of said evaluation sessions includes a plurality of visual perception tasks in each of which there is displayed to the person at least one image designed to elicit a response useful for selecting at least one other image to be displayed in the subsequent visual perception task of the respective evaluation session such as to progressively improve the evaluation of the visual perception ability of the person with respect to the detected defect.

34. (New) The method according to Claim 26, wherein said plurality of images in at least the treatment phase are images based on Gabor Functions.

35. (New) The method according to Claim 26, wherein said plurality of images are displayed in a client's terminal in both said evaluation phase and said treatment phase;

and wherein said elicited responses are communicated to a remotely-located server and utilized to select said another plurality of images designed to treat the person with respect to the detected visual defect.

36. (New) Apparatus for improving the visual perception ability of a person with respect to a particular eye condition of at least one eye, comprising: a display device for displaying images to the person;

an input device for displaying images to the person;
training glasses to be worn by the person and having a reduced refraction with respect to at least one eye of the person;
and a processor programmed such that:
in an evaluation phase, before said training glasses have been applied to the person, the processor controls said display device to display to the person a plurality of images selected to test the visual perception ability of the person with respect to at least one visual defect, and utilizes responses inputted by the person via said input device to select another plurality of images designed to improve the visual perception ability of the person with respect to a detected visual defect;
and in treatment phase, after said training glasses have been applied to the person, the processor controls said display device to display to the person said another plurality of images to thereby improve the visual perception ability of the person with respect to said detected visual defect.

37. (New) The apparatus according to Claim 36, wherein said treatment phase includes a plurality of treatment sessions in each of which said processor controls said display device to display a plurality of images designed to elicit responses from said person, which responses are used for selecting the plurality of images in a subsequent treatment session, such as to progressively improve the visual perception ability of the person with respect to the detected visual defect.

38. (New) The apparatus according to Claim 37, wherein the refraction of said training glasses is variable such that after each treatment session, the refraction may be increased, decreased, or permitted to remain the same for the next treatment session, as determined by said processor in order to progressively improve the visual perception ability of the person with respect to the detected visual defect.

39. (New) The apparatus according to Claim 38, wherein said processor is programmed to control said display device to display in each of said treatment sessions a plurality of visual perception tasks in each of which there is displayed to the person at least one image including stimuli designed to elicit response useful for selecting at

least one other image to be displayed in the subsequent visual perception task of the respective treatment session, such as to progressively improve the visual perception ability of the person with respect to the detected defect.

40. (New) The apparatus according to Claim 39, wherein said processor is programmed to control such display devices to display said visual perception tasks in at least some of said sessions in the treatment phase to include spatial frequency changes in which the spatial frequency of said stimuli is changed.

41. (New) The apparatus according to Claim 40, wherein said processor is programmed to control said display device to change the spatial frequency of said stimuli by starting with lower spatial frequencies and progressively moving to higher spatial frequencies.

42. (New) The apparatus according to Claim 39, wherein said processor is programmed to control said display device, in at least some of said treatment sessions in the treatment phase, to change the orientations of said stimuli by progressing them towards a distortion area in an astigmatic zone of the eye of treatment an eye for astigmatism.

43. (New) The apparatus according to Claim 39, wherein said processor is programmed to include in said treatment phase a sufficient number of treatment sessions to improve the person's contrast sensitivity function by the person achieving a desired range of contrast levels representing a desired contrast funnel.

44. (New) The apparatus according to Claim 37, wherein said evaluation phase includes a plurality of evaluation sessions in each of which said processor controls said display device to display a plurality of images to elicit responses inputted via said input device and utilized by said processor to select the plurality of images to be displayed in the next evaluation session.

45. (New) The apparatus according to Claim 36, wherein:
said display device and said input device are in a client terminal at the location of the person whose visual perception ability is to be improved;
said processor is in a remotely-located server;
said plurality of images are displayed in said client terminal in both said evaluation phase and said treatment phase; and
said inputted responses are communicated to said remotely-located server via said input device, are utilized by said server to select said another plurality of images designed to treat the person with respect to the detected visual defect, and are communicated to said server to said client terminal for display thereon at the location of the person whose visual perception ability is to be improved.